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| 10/729,414 | 12/05/2003 | Todd D. Wakefield | 17354.4.2 | 8384 |
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| WORKMAN NYDEGGER 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111 | | | EXAMINER RADTKE, MARK A | |
| | | | ART UNIT 2165 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/729,414

Applicant(s)

WAKEFIELD ET AL.

Examiner

Mark A. X Radtke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20071023.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 August 2007 has been entered.

Remarks

2. In response to communications filed on 23 August 2007, claim(s) 1-4, 14-17 and 27-30 is/are amended per Applicant's request. Therefore, claims 1-38 are presently pending in the application, of which, claim(s) 1, 14 and 27 is/are presented in independent form.

3. The IDS filed 23 October 2007 has been considered.

4. In light of Applicant's amendments, the rejections under 35 U.S.C. 112, second paragraph, have been withdrawn. Applicant's amendments have necessitated new grounds of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9, 11-22, 24-35 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Budzinski (U.S. Patent 5,715,468) in view of Khalfay et al. (U.S. Patent 7,039,875), further in view of Barker ("Systematic construction of a versatile case system" from Natural Language Engineering, published 1997).

As to claim 1, Budzinski teaches a computer program product located to one or more storage media devices usable to perform integration of mixed format data, said computer program product comprising instructions executable by a computer to perform the functions (see Abstract) of:

linguistically parsing the identified text records (see Figures 5a-5h and column 4, line 62, "parsing");

identifying thematic roles and relationships within the parsed text records (see column 4, lines 48-59);

applying caseframes to the linguistic parse and thematic roles to produce attribute extractions, each of said attribute extractions containing attribute information of the free text (see column 2, line 60 – column 3, line 5); and

integrating the extractions with the structured data, said integrating step producing integrated data (see column 24, lines 5-33, where "integrating" is read on "learning"); and

data mining the integrated data (see Abstract, wherein "data mining" is read on "retrieving").

Budzinski does not explicitly teach
accessing a database of structured and unstructured data, and
reading an access reference, the access reference having unstructured data including free text.

Khalfay et al. teaches a computer program product located to one or more storage media devices usable to perform integration of mixed format data, said computer program product comprising instructions executable by a computer to perform the functions (see Abstract) of:

accessing a database of structured and unstructured customer data (see columns 6-7, spanning paragraph, "natural language" and "templates"),

reading an access reference, the access reference having unstructured data including free text (see column 6, lines 53-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Budzinski by the teaching of Khalfay et al. because "the output can be [...] graphical" (see Budzinski, column 18, lines 51-52).

Budzinski, as modified, still does not explicitly teach

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linguistically parsing the identified text records to generate a linguistic parse that includes at least syntactic roles in the identified text records, the syntactic roles including grammatical information; and

identifying thematic roles and relationships within the parsed text records based in part on the identified syntactic roles, wherein the identification of thematic roles and relationships maps the syntactic roles including the grammatical information into a smaller set of semantically-focused components.

Barker teaches

linguistically parsing the identified text records to generate a linguistic parse that includes at least syntactic roles in the identified text records, the syntactic roles including grammatical information (see page 301, section 5.1); and

identifying thematic roles and relationships within the parsed text records based in part on the identified syntactic roles, wherein the identification of thematic roles and relationships maps the syntactic roles including the grammatical information into a smaller set of semantically-focused components (see page 294 section 4.4 and see Appendix 1).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to further modify Budzinski, as modified, by the teaching of Barker because all claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods, and the combination would have yielded predictable results to one of ordinary skill in the art

at the time the invention was made. Furthermore, "[c]ase systems about in natural language processing" (see Barker, Abstract).

As to claims 2, 15 and 28, Budzinski, as modified, teaches wherein said accessing a database of structured and unstructured customer data further comprises accessing unstructured data contained within the database of structured data (see column 24, lines 17-19, "storing the text presented to the invention").

As to claims 3, 16 and 29, Budzinski, as modified, teaches wherein said accessing a database of structured and unstructured customer data further comprises accessing and said accessing a database of structured data access two separate data sources (See column 6, lines 19-21 and figure 1. Each Memory 80, 90, 100 and 120 is a different data source).

As to claims 4, 17 and 30, Budzinski, as modified, teaches wherein said instructions are further executable to perform the function of applying caseframes while performing said linguistically parsing the identified text records (see column 2, line 60 – column 3, line 5).

As to claims 5, 18 and 31, Budzinski, as modified, teaches wherein said instructions are further executable to perform the function of producing a new database containing the integrated data produced by said integrating (See column 59, lines 29-

36. Partitions are logical databases consisting of several databases spread across different physical volumes or databases. See "Partition (database) – Wikipedia". Available online at http://en.wikipedia.org/wiki/Partition_%28database%29).

As to claims 6, 19 and 32, Budzinski, as modified, teaches wherein said instructions are further executable to perform the function of inserting the integrated data into the database of structured data while performing said integrating of the produced data (See column 23, line 66 – column 24, line 4 and see Abstract. Each process will be executed concurrently on a modern operating system).

As to claims 7, 20 and 33, Budzinski, as modified, teaches wherein said instructions are further executable to perform the function of creating a new database while performing said integrating the produced data (see Examiner's comments regarding claims 5 and 6).

As to claims 8, 21 and 34, Budzinski, as modified, teaches wherein the instructions are further executable to produce a new relational database containing the integrated data produced by said integrating (see Examiner's comments regarding claims 7 and column 3, lines 56-67, "relations").

As to claims 9, 22 and 35, Budzinski, as modified, teaches wherein the instructions are further executable to produce a file containing the integrated data

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produced by said integrating (see Examiner's comments regarding claim 5. A partition is a new file).

As to claims 11 and 24, Budzinski teaches a computer system including a computer program product according to claim 1, further comprising:

a processing unit coupled to said one or more storage media devices, said processing unit being capable of executing said instructions (It is well-known in the art that all computers have processors. See Abstract.); and

an execution command unit, whereby operation of said instructions and said processing unit may be commanded or controlled (see column 16, lines 14-21 and column 34, lines 50-53).

As to claims 12, 25 and 37, Budzinski, as modified, teaches wherein said instructions are further executable to store an integrated database while performing said integrating step (see column 24, lines 5-33).

As to claims 13, 26 and 38, Budzinski, as modified, teaches wherein the integrated data produced by the performance of said integrating the produced data includes reference information to the original free text for construed data (See column 6, lines 60-65. Reference information links word usage and syntax with the concept structures).

As to claim 14, Budzinski teaches a computer program product located to one or more storage media devices usable to perform integration of mixed format data, said computer program product comprising instructions executable by a computer to perform the functions of (see Abstract):

wherein linguistically parsing includes at least syntactic roles including one or more of subject, direct object, indirect object, objects of prepositions, or any combination thereof (see Barker, page 282, section 2.1.1, "Conventions"); and

wherein identifying thematic roles identify a relationship between an action in the text records and one or more of an actor, an object, a recipient, an experiencer, an instrument, a location, a time, or any combination thereof (see Barker, section 4.4.1, "Participant").

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 27, Budzinski teaches a method for integrating mixed format data, comprising the steps of (see Abstract):

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

7. Claims 10, 23 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Budzinski in view of Khalfay et al. as applied to claims 9, 22 and 35 above, and further in view of Examiner's Official Notice.

As to claims 10, 23 and 36, Budzinski, as modified, does not explicitly teach wherein the instructions are further executable to produce a file having a format selected from the group of XML, character separated values, spreadsheet formats and file-based database structures.

However, Examiner takes Official Notice that the use of the elements of the group to store database information is conventional and well known.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to produce a file in one of several formats because Examiner takes Official Notice that the use of the elements of the group to store database information is conventional and well known (see XML Converter Standard Edition, available online at <http://rustemsoft.com/XMLConverter.htm>).

Response to Arguments

8. Applicant's arguments filed on 23 August 2007 with respect to the rejected claims in view of the cited references have been fully considered but are moot in view of the new grounds for rejection.

Additional References

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of art with respect to natural language processing in general:

| <u>Doc. No.</u> | <u>Assigned to</u> |
|-----------------|---------------------------------|
| US 6732097 B1 | Wakefield; Todd D. et al. |
| US 6732098 B1 | Wakefield; Todd D. et al. |
| US 6738765 B1 | Wakefield; Todd D. et al. |
| US 6741988 B1 | Wakefield; Todd D. et al. |
| US 7171349 B1 | Wakefield; Todd D. et al. |
| US 4914590 A | Loatman; Robert B. et al. |
| US 6901402 B1 | Corston-Oliver; Simon H. et al. |
| US 7181438 B1 | Szabo; Andrew |
| US 5646840 A | Yamauchi; Satoshi et al. |

Conclusion

10. Any inquiry concerning this communication or earlier communications should be directed to the examiner, Mark A. Radtke. The examiner's telephone number is (571) 272-7163, and the examiner can normally be reached between 9 AM and 5 PM, Monday through Friday.


If attempts to contact the examiner are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (800) 786-9199.

maxr

31 October 2007



JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100